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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,451	02/19/2002	Jong-Hyuck Park	030681-360	9870
21839	7590	06/13/2006	EXAMINER	
BUCHANAN INGERSOLL PC (INCLUDING BURNS, DOANE, SWECKER & MATHIS) POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			WONG, WARNER	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,451

Applicant(s)

PARK, JONG-HYUCK

Examiner

Warner Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-7, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) 2-4, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Bellenger (US 5,982,768).

Regarding claims 1 and 7, Bellenger describes a ADSL (VDSL) method/system between two stations (fig. 1, computer system 100 & network service provider 160), comprising:

(a) handshaking basic, required information between the two stations in a first tone space mode, and for determining whether or not each of the two stations supports a second tone space mode (fig. 10, step 1020 & col. 15, lines 49-51, where the modems initially exchange/handshake using the old communication parameters (first tone space mode) in determining whether if the communication session should use (supports) new communication parameters (second tone space mode)).

(b) switching the first tone space mode to the second tone space mode by detecting loop in each of the two stations for adjusting a tone space when it is determined in step (a) that each of the two stations supports the second tone space mode (fig. 10, step 1060 and col. 15, lines 42-46 & 60-62, where the two modems, in detecting a supported subscriber loop for the DSL communication, switches from using

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the old communication parameters (first tone space mode) to the new communication parameters (second tone space mode).

(c) exchanging information actually need in data communications between the two stations in the second tone space mode for an actual initialization (fig.10, step 1080 & col. 15, lines 16-17, where the modems further exchange (initialization) parameters for the (next) data communication session).

3. **Claims 6 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellinger as applied to claims 1 and 7 above respectively, and further in view of the applicant's prior art, hereinafter referred to as "APA".

Bellinger describes that the two stations are modems, one at a remote terminal (fig. 1, one modem 110 at the remote terminal 100 and the other modem 130 at the central office 140).

Bellinger fails to describe the other station is at an optical network unit.

The applicant's prior art describe that the non-remote station is at the optical network unit (fig. 1 VTU-O and p. 1, lines 15-19).

It would have been obvious to one with ordinary skill of art at the time of invention by applicant to specify that the other station is at an optical network unit.

The motivation for combining the teachings is that provides an infrastructure supporting communication/exchanges of VDSL messages and symbol type (APA, p. 1, lines 14-19).

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4. **Claims 5 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellenger, and further in view of Bruss (2001/0026538).

Bellenger describes all limitations set forth in claims 1 and 7 respectively.

Bellenger fails to describe: in step (a) whether or not the two stations are capable of supporting the second tone space is found by exchanging messages, and capability information is transmitted through a non-standard information field.

Bruss describes: in step (a) whether or not the two stations are capable of supporting the second tone space is found by exchanging messages, and capability information is transmitted through a non-standard information field (fig. 2, new/non-standard message #202 and #203 exchanges between the UE #206 and MSC/VLR #208).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate message exchanges through (non-standard) information field in support of second tone space (capability).

The motivation for combining the teaching is that "it would be desirable to provide systems and methods for handling the exchange of multicall capabilities.. that supports [second tone space] compatibility with second generation devices" (Bruss, paragraph 13), where the compatibility is referring to the second tone space and second generation devices are referring to the VSDL devices.

Allowable Subject Matter

5. Claims 2-4 and 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 6, 7 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Furthermore, the independent claims are too broad. It only specifies "VDSL" in the preamble, which is not weighted, and does not specify "tone space" as different frequencies, such as that on p. 1 of the specification, allowing the examiner to interpret "tone space mode" as any type of "modes".

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Rango (US 6,788,705), Tokunaga (US 6,885,697), Hwang (US 6,590,893).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong
Examiner
Art Unit 2616

HW



RICKY Q. NGO
SUPERVISORY PATENT EXAMINER